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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------|-------------|----------------------|---------------------|------------------|
| 10/718,622 | 11/24/2003 | Yasuo Aotsuka | 0649-0925P | 1289 |
| 2292 | 7590 | 01/26/2007 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH | | | LE, TUAN H | |
| PO BOX 747 | | | ART UNIT | PAPER NUMBER |
| FALLS CHURCH, VA 22040-0747 | | | 2622 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
|----------------------------------------|-------------------|---------------|
| 3 MONTHS | 01/26/2007 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/26/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/718,622 | AOTSUKA, YASUO | |
| | Examiner Tuan H. Le | Art Unit 2622 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 November 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-7 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 22 January 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Hyodo et al (U.S. Pat. 6,952,225 B1).

Regarding **claims 1 and 5**, Hyodo et al discloses a solid-state imaging apparatus (see Hyodo et al, Fig. 1 and column 4 lines 17-19):

a solid-state imaging element (14) having a plurality of pixels for subdividing incident light from a photographic subject into a plurality of color signals (50 R, 50G, and 50 B) so as to image the photographic subject, the solid-state imaging element including two sorts of pixels (50 R and 50 G) whose spectral sensitivities are different from each other as said pixel for detecting at least one color among said plurality of color signals;

and signal processing means (30) for performing a white balance correcting operation based upon a gain amount (Rg, Gg, and Bg) corresponding to a sort of a light source with respect to photographed image data outputted from the solid-state image element, (see Hyodo et al, Fig. 2 and column 1 lines 45-60),said signal processing means including:

mixing ratio predicting means operated in such a manner that when there are plural sorts of light sources (shade, fluorescent lamp, and electric bulb) as to the incident light, a mixing ratio (evaluation values) of illumination light emitted from said plural sorts of light sources is predicted every pixel from photographed image data acquired by said pixels having two sorts of said spectral sensitivities, (see Hyodo et al, Fig. 3 and column 2 lines 47-64);

and gain amount calculating means for calculating a gain amount (Rg, Gb, and Bg) used to perform the white balance correcting operation every pixel in response to said mixing ratio, (see Hyodo et al, column 4 lines 54-60).

As for **claims 3 and 7**, as previously mentioned in the discussion of claims 1 and 5, Hyodo et al discloses all of the limitations of the parent claims. Additionally, Hyodo et al discloses that said signal processing means further includes light source sort judging means for judging a sort of light source based upon said photographed image data (see Hyodo et al, Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyodo et al (U.S. Pat. 6,952,225 B1) and further in view of Suga (U.S. Pat. 5,198,890).

As for **claims 2 and 6**, as previously mentioned in the discussion of claims 1 and 5, Hyodo et al discloses all of the limitations of the parent claim.

However, Hyodo et al does not disclose means for multiplying a color difference signal obtained from said photographed image data by a color difference matrix so as to correct a color tone; and color difference matrix correcting means for correcting a coefficient of said color difference matrix in response to said mixing ratio.

On the other hand, Suga discloses means (411 and 412), (see Suga, Fig. 1) for multiplying a color difference signal obtained from said photographed image data by a color difference matrix (307), (see Suga, Fig. 1) so as to correct a color tone; and color difference matrix correcting means (8), (see Suga, Fig. 1) for correcting a coefficient of said color difference matrix in response to said mixing ratio:

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the multiplying means and color difference matrix correcting means as described by Suga into the imaging apparatus described by Hyodo et al to obtain an imaging apparatus with correction of color tone by adjusting coefficients of color difference matrix because such implementation ensures that the white balance is maintained with high accuracy over a wide variety of types of light sources.

As for **claim 4**, as previously mentioned in the discussion of claim 2, Hyodo et al and Suga disclose all of the limitations of the parent claim. In addition, Hyodo et al discloses that said signal processing means further includes

light source sort judging means for judging a sort of light source based upon said photographed image data (see Hyodo et al, Fig. 2).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Suemoto et al (U.S. Pat. 5,099,313) discloses a method of determining if the light source is fluorescent and thus requiring a white balance correction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Le whose telephone number is (571) 270-1130. The examiner can normally be reached on M-Th 7:30-5:00 F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tuan Le
January 22, 2007.


TUAN HO
PRIMARY EXAMINER